Mirror Frame Drilling Jig

by John Lucas

I spent part of a recent two days working on this drilling jig. I've been drilling my mirrors the hard way for years. I decided it was time to make something that had a micro adjustable table, and an easy way to clamp the mirrors. This is what I came up with. It works great.

I also made a woodturning tool rest for my metal lathe. I'm working with a glass artist who wants to add metal parts to his glass. A few weeks ago I taught him to turn them using a wood lathe but it's really slow and you get too much chatter. These are long thin tapered pieces. I rigged up the metal lathe so we could rough them out using the metal tools and cross feed them. Put the wood tool rest on and fine tune the shape with spindle gouges and scrapers. This worked great. If you want to see how much longer a Thompson tool lasts, turn metal. I turned one whole spindle with the Thompson gouge. I have to sharpen HSS tools at least three times or more to turn the same spindle.

I drilled and glued in the handles of all these mirrors today after finishing the drilling jig.

I turn the mirror heads by gluing a 3" square block to the face side of the mirror with CA (cyanoacrylate—Super Glue) and accelerator. I put this in a chuck with 4" jaws mounted between the square corners. Then I turn the 4" hole for the mirror. I break the CA joint by hitting it with a chisel and mallet. Then I mount the mirror on my four jaw chuck.

If you don't have 4" jaws mount the block on a wasteblock. I drill a hole in the center of the square block and then drill hole in the wasteblock. I glue the square block to the wasteblock by putting a dowel in the two holes without glue. This aligns them. Then turn the corners of the square block down until it fits the opening for the mirror. Use CA and accelerator to glue the mirror on. Turn the face side.